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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MICHAEL NORMAN DAY, BRIAN KING FLACHS, HARM PETER HOFSTEE, CHARLES RDY JOHNS, and JOHN SAMUEL LIBERTY

Appeal 2009-005205
Application 10/606,582
Technology Center 2100

Decided: May 19, 2010

Before LANCE LEONARD BARRY, STEPHEN C. SIU, and DEBRA K. STEPHENS, *Administrative Patent Judges*.

SIU, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 20-35. Claims 1-6, 14, and 19 have been withdrawn. Claims 7-13 and 15-18 have been cancelled. We have jurisdiction under 35 U.S.C. § 6(b).

The Invention

The disclosed invention relates generally to utilizing channel registers and counters to maintain communication between an external device and a processor (Spec. 2).

Independent claim 20 is illustrative:

> 20. A method for tracking communications between a processing unit (PU) and an external device (ED), comprising:
> receiving, by the PU, data from the ED, into a read register;
> sending, by the PU, data to the ED, from a write register;
> incrementing a read channel count upon receipt of inbound data from the ED by the PU;
> issuing a read channel instruction to decrement the read channel count upon processing of received inbound data by the PU;
> incrementing a write channel count upon receipt of outbound data from the PU by the ED;
> issuing a write channel instruction to decrement the write channel count upon transmission by the PU of the outbound data to the ED;
> accessing the read channel count; and
> comparing the accessed read channel count with a predetermined range to determine whether the PU has received data from the ED.

The References

The Examiner relies upon the following references as evidence in support of the rejections:

Young	US 6,408,354 B1	June 18, 2002
Stuber	US 6,801,972 B2	Oct. 05, 2004 (filed Feb. 15, 2002)

The Rejection

The Examiner rejects claims 20-35 under 35 U.S.C. § 103(a) as being unpatentable over Young and Stuber. The Examiner withdraws the rejection of claims 28-35 under 35 U.S.C. § 101 and the rejection of claims 20-35 under 35 U.S.C. § 112, first paragraph.

ISSUE

Appellants assert that "the Examiner's [obviousness] rejection [of claims 20-38] is insufficient on its face." (App. Br. 12).

The Examiner finds that Young discloses incrementing a count upon receipt of data from a processing unit by an external device because Young "discloses the buffer [of Fig. 3] being bi-directional . . . [and a counter] being incremented for each outbound data that's going into the buffer." (Ans. 9).

Did the Examiner err in finding that Young discloses or suggests incrementing a write channel count upon receipt of outbound data from a processing unit by an external device?

FINDINGS OF FACT

The following Findings of Facts (FF) are shown by a preponderance of the evidence.

1. Young discloses that "data is transferred from SCSI bus 120 to PCI bus 110" (col. 7, ll. 7-8) while a "direction controller 360 determines which of the two bi-directional data channels 302 and 303 is idle and

configures direction multiplexer 361 to connect SCSI module 230 to that channel." (Col. 7, ll. 9-12, Fig. 3).

2. Young discloses that "a first counter is incremented as each unit of data is transferred to bi-directional buffer 340, and decremented as each unit of data is removed from bi-directional buffer 340" (col. 7, ll. 57-60) such that a "value of zero in the first counter indicates that channel 302 is ready for use." (Col. 7, ll. 60-62, Fig. 3).
3. Young discloses a "second counter is incremented as each unit of data is transferred to bi-directional buffer 345, and decremented as each unit of data is removed from bi-directional buffer 345" such that a "value of zero in the second counter indicates that channel 303 is ready for use." (Col. 7, ll. 62-66, Fig. 3).

PRINCIPLES OF LAW

Obviousness

The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, and (3) the level of skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966).

"The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 416 (2007).

ANALYSIS

The Examiner finds that "fig. 3 of Young discloses a bi-directional data channel 303 functioning as a processing unit in communication with an external device (SCSI module 230)." (Ans. 8). Hence, the Examiner equates the "SCSI module 230" of Young to the claimed "external device" and the "bi-directional data channel 303" of Young to the claimed "processing unit."

Even assuming to be valid the Examiner's correlation of a "data channel" (Young) to the claimed "processing unit," claim 1 requires that a counter be incremented upon receipt of data by the external device (i.e., the "SCSI module"), the data being sent from the processing unit (i.e., the "data channel"). We do not find that Young discloses this condition, nor has the Examiner demonstrated that Young discloses this condition. Rather, Young discloses that a counter is "decremented as each unit of data is removed from bi-directional buffer." (FF 3). Since "the value of each of the counters [is used to] determine whether a channel is available" (col. 8, ll. 1-2) and that a "value of zero in the first counter indicates that [the channel] is ready for use" (col. 7, ll. 60-62), we find no reason for Young to increment, rather than decrement, the counter when data is removed from the buffer, since doing so would cause the counter to continue to increase and never return to zero (to indicate that channel is ready for use).

The Examiner states that the buffer taught by Young is "bi-directional." (Ans. 9). However, even assuming the buffer to be "bi-directional," Young still does not appear to disclose or suggest incrementing a counter when data is sent from the buffer (which the

Examiner equates to the claimed "processing unit") and received at the SCSI module (which the Examiner equates to the claimed "external device").

The Examiner also states that the "buffer's counter is being incremented for each outbound data that's going into the buffer." (Ans. 9). Since the Examiner finds that the buffer of Young is equivalent to the claimed "processing unit," the Examiner finds that Young discloses incrementing a counter "for each outbound data that's going into" the processing unit (i.e., the "buffer"). However, claim 1 requires incrementing the counter upon receipt of data by the external device, not the processing unit. Thus, while the Examiner finds that Young discloses incrementing a counter upon receipt of data by a "processing unit," the Examiner has not demonstrated that Young also discloses incrementing a counter upon receipt of data by an "external device."

Independent claim 28 recites similar features as claim 20. Accordingly, we conclude that the Examiner erred in rejecting independent claims 20 and 28, and of claims 21-27 and 29-35, which depend therefrom.

CONCLUSION OF LAW

Based on the findings of facts and analysis above, we conclude that the Examiner erred in finding that Young discloses or suggests incrementing a write channel count upon receipt of outbound data from a processing unit by an external device.

DECISION

We reverse the Examiner's decision rejecting claims 20-35 under 35 U.S.C. § 103(a).

REVERSED

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